

Miroslav Barták

Types of Palaearctic *Rhamphomyia* in Bezzi Collection (Milan), with description of a new species (Diptera, Empididae)

Abstract - Types of 19 species of Palaearctic *Rhamphomyia* deposited in Museo Civico di Storia Naturale, Milan, Italy, were studied. Lectotypes of *Rhamphomyia anfractuosa* Bezzi, *R. heterochroma* Bezzi, *R. nubigena* Bezzi and *R. scitula* Frey are designated. *R. biroi* Bezzi (female only), *R. nubigena* and *R. scitula* are redescribed and illustrated. *Rhamphomyia (Aclonempis) marrobezzi* sp. n. from Croatia (North Dinaric) is described and illustrated.

Key words - Diptera, Empididae, *Rhamphomyia*, taxonomy, faunistics

Riassunto - Tipi di *Rhamphomyia* paleartiche nella Collezione Bezzi (Milano), con descrizione di una nuova specie (Diptera, Empididae)

Sono stati studiati i tipi di 19 specie di *Rhamphomyia* paleartiche presenti nella Collezione Bezzi, conservata al Museo Civico di Storia Naturale di Milano. *Rhamphomyia anfractuosa* Bezzi, *R. biroi* Bezzi, *R. heterochroma* Bezzi, *R. magellensis* Bezzi in Frey, *R. nubigena* Bezzi, *R. pokornyi* Bezzi, *R. bezzii* Frey, *R. brevipila* Oldenberg, *R. curvula* Frey, *R. dentata* Oldenberg, *R. hirsuta* Oldenberg, *R. hirtimana* Oldenberg, *R. kamtschatica* Frey, *R. minor* Oldenberg, *R. montana* Oldenberg, *R. nov* Oldenberg, *R. oldenbergi* Frey, *R. scitula* Frey, *R. unguiculata* Frey. Di *Rhamphomyia anfractuosa*, *R. heterochroma*, *R. nubigena* e *R. scitula* vengono designati i lectotipi. *Rhamphomyia (Aclonempis) marrobezzi* n. sp., di Croazia, viene descritta su un esemplare maschio presente in collezione Bezzi sub *R. umbripennis* Meigen, la nuova specie e la terza *Aclonempis* europea nota con venatura M1 accorciata, insieme a *R. (A) leptopus* Loew e *R. (A) andalusiana* Strobl, che ne differiscono, oltre che per i genitali alquanto differenti, la prima per la venatura A completa e le setole addominali scure, la seconda per le setole metapleurali scure e l'addome pruinoso. Vengono confermate le seguenti sinonimie: *Rhamphomyia bezzii* Frey, 1922 = *R. armimana* Oldenberg, 1910; *R. hirsuta* Oldenberg, 1922 = *R. crassimana* Strobl, 1898; *R. oldenbergi* Frey, 1922 = *R. tibialis* Meigen, 1822.

Parole chiave - Diptera, Empididae, *Rhamphomyia*, tassonomia, faunistica

Introduction

Famous Italian dipterist, Dr. Mario Bezzi, described between 1898 - 1908 six species of Palaearctic *Rhamphomyia*, one additional, *R. magellensis* was described by Bezzi in Frey, 1922. Types of all of them except *R. chionopectera*

(treated by Barták 1981: 376) are studied here in addition to types of other authors deposited in Bezzi Collection. Through the courtesy of Dr. Maurizio Pavesi and Dr. Riccardo Sciaky I had the possibility to study all types of Palaeartic *Rhamphomyia* present in Bezzi Collection (Museo Civico di Storia Naturale, Milano, MCM). Due to the frequent exchanges of materials with other dipterists, Bezzi gathered also type materials of other authors, now deposited at MCM. Abbreviations used in redescrptions follow my previous papers (Barták 1982, 1985).

Systematic treatment

Species described by Bezzi

Rhamphomyia (*Pararhamphomyia*) *anfractuosa* Bezzi, 1904

Rhamphomyia anfractuosa Bezzi, 1904: Annls. hist. - nat. Mus. natn. hung., 2: 199.

Described from "Gyón, leg. Kertész, Austria: Mödling, leg. Pokorny, Germania: Berlin, leg. Oldenberg". There are 15 syntypes (8M and 7F) under "*Rhamphomyia anfractuosa* n. sp." deposited in MCM as well as other materials, partly from type localities but with collecting data later than date of description or illegible. One well preserved male labelled "Gyón Kertész, 1899 1. x." was selected as a lectotype and is herewith designated. Other syntypes were labelled as paralectotypes as follows: same data as lectotype (1M, 2F); Gyón, 2. x. 1899, 1F; same loc., 4. ? x. 1899, 1F; Mödling, 18. ix. 1887, coll. Pokorny, 2M, 1F; same loc. but 16. ix. 1892, 1M, 1F; Berlin Pichselberg, 22. x. 1897 leg. Oldenberg, 1F; Berlin Schildhorn, 10. ix. 1900, leg. Oldenberg, 3M. Other material: *R. anfractuosa* (Berlin, illegible date, 1M, 4F, Gyón, various dates 1906 - 7, 7F). Under "*anfractuosa* var." there are other specimens of *R. anfractuosa* with various extent of "pennation" on middle femora (variable in this species) from Mori (20 and 26. ix. 1890, 3M, 4F) and P. Ceresio (= Porto Ceresio), 13. ix. 1896, 1F. *R. anfractuosa* was redescrbed, illustrated and keyed by Barták (1982: 419). However, specimens from the East Palaeartictis (e. g. Indigirka in Frey 1956: 467) belong to a different, still undescribed species (differing from *R. anfractuosa* e. g. in having subpolished mesonotum) and, therefore, these data were ignored by Chvála & Wagner (1989: 297).

Rhamphomyia (*s. str.*) *biroi* Bezzi, 1908

Rhamphomyia biroi Bezzi, 1908: Annls. hist. - nat. Mus. natn. hung., 6: 392.

Described from 1M and 3F from Crete, Monte Ida. But there is only one syntypic female present in MCM under "*Rhamphomyia Biroi* n. sp.". It is slightly damaged specimen, but all parts of body are present at least on one side. This specimen belongs to the *R. (s. str.) ignobilis* - group, which may be characterized as follows: ac bristles biserial, prosternum bare on tip, vein A complete, ax angle acute, propleura hairy, halteres yellow, legs brown to black, costal bristle absent, male eyes meet on frons, syncercus (upper lamella) simple and short, ph bristle present. This group of species comprises *R. nitidula* Zetterstedt, 1842, *R. nitidistriata* Saigusa, 1964, *R. micans* Oldenberg, 1915, *R. dombai* Barták, 1983, *R. ignobilis* Zetterstedt, 1859, *R. maroccana* Collin, 1953, and *R. nigromaculata* von Roser, 1840, as well as two still undescribed species known to me from Croatia and Israel. This group of species is closely related to *R. tibialis* - group

(differing only in multiserial ac) and *R. laevipes* - group (differing in a long costal bristle). Because the male remains unknown to me, it is difficult to state the differences from other species of the *R. ignobilis* - group. According to Frey (1956: 528), *R. biroi* has hind femur without ventral bristles, which also lead him to arrange the species into the collective subgenus *Eorhamphomyia*. Female may be differentiated from other species of this group by the absence of polished stripes on mesonotum, the absence of strong ventral bristles on middle femora and the abdomen without silver pruinosity.

Redescription of *R. biroi* female: head brownish black, all parts grey pruinose, all hairs black. Eyes dichoptic, all ommatidia of subequal size. Frons with two short hairs along both sides of its lower part. Ocellar bristles strong and long, face bare, occiput equally covered with hairs. Antennae black, both basal segments a little lighter, ratio of antennal segments (in 0.01 mm scale) 1: 2: 3: style = 1. 6: 1. 2: 4: 0. 7. Labrum brown, lustrous, 1. 2 times as long as head is high. Palpi brown, short, covered with 8 - 10 black hairs. Thorax black, rather light grey pruinose, but the pruinosity is scratched on mesonotal disc. All bristles and hairs black. Sides of prosternum with 7 - 8 hairs, propleura with 2 - 3 hairs, tip of prosternum bare, 14 - 16 hairs form pronotal "collar". There are more than 30 biserial, fairly fine ac which are a little shorter than the distance between rows of ac and dc, more than 30 3 - 4 serial dc are about as long as the distance between rows of ac and dc, spreading out in front down the sides of mesonotum, 1 strong h bristle accompanied with many short hairs, 0 - 1 ih, 1 ph, 3 n, 5 - 6 hairs in front part of notopleura, 2 - 3 sa, about 6 prealar hairs, 1 strong and another very short pa, 4 se and two additional hairs. Coxae black, grey pruinose, black haired. Legs brownish black, pruinose, covered with black bristles and hairs. There is a long bristle in "comb" at tip of hind tibia. Front and middle femur with short hairs only. Front tibia short haired, almost without any bristles except preapicals. Middle tibia with 1 - 2 ad and pd bristles which are a little shorter than diameter of tibia. Hind femur sparsely covered with short hairs ventrally, dorsal ciliation a little longer. Hind tibia with two rows of bristles dorsally about as long as tibia is thick. The first tarsomeres of all legs short haired. Wing membrane slightly yellowish, stigma darker, costal bristle absent. Veins brown, vein A complete, ax angle sharply acute, squama yellowish brown, with brown fringes. Cell D short. Abdomen brownish black, fairly light grey pruinose, all bristles and hairs black. Hind marginal bristles on sides of tergite 2 about half as long as this segment, those on T 3 - 4 about one third as long, those on the following segments very short. Length of body about 4. 2 mm (difficult to measure because specimen at hand is slightly deformed), wing about 4. 8 mm (the only wing present is broken).

Distribution: Crete.

Rhamphomyia (Holoclera) heterochroma Bezzi, 1898

Rhamphomyia heterochroma Bezzi, 1898: Természetr. Füzet., 21: 439.

The species was described from "montes Tátra in Hungaria", in fact Tatry Mts. (Slovak and Poland). There are many specimens under "*Rhamphomyia heterochroma* Bezzi" but only two of them originate from the type locality. One male labelled "Tátra Kertész" "19. vii. 97" was selected as a lectotype and it is designated herewith. The lectotype is well preserved, with only left hind leg

missing, left wing glued below the specimen. Another specimen with the same data, a female, seems to be *R. flaviventris*. The rest of the materials: *R. heterochroma* (St. Moritz, 3. vii. 1906, leg. Oldenberg, V. (= Val) Fontana, 3. viii. 1902, Tyrolis, Pieve di Ledro, 4. viii. 1886, Tyrolis, Stilfser Joch (= Passo dello Stelvio), Togno (= Val di Togno), 20. vi. 1902, Mandronhütte (= Monte Mandrone, rifugio), 31. vii. 1894, Chiareggio, altogether 9M and 7F), *R. culicina* (Chiareggio, 20. viii. 1902, 14. viii. 1903, altogether 6M). *R. heterochroma* was redescribed and illustrated by Barták (1982: 444). The male may be easily distinguished from any other species of the *Rhamphomyia* (*Holoclera*) *flava* - group by the holoptic eyes and the complete vein A. Female (having thorax yellow in ground colour, vein A complete, ax angle right to acute, 6 - 8 sc bristles and lustrous clypeus) is extremely similar to female of *R. flaviventris* Macquart, 1827, however, *R. flaviventris* has middle femur usually without strong anterior bristles in apical third, hind femur without strong ventral bristles in basal half and the first sternum without bristles (*R. heterochroma* has these bristles at least partly present).

Rhamphomyia (*Lundstroeniella*) *magellensis* Bezzi in Frey, 1922

Rhamphomyia magellensis Bezzi in Frey, 1922: Notul. ent., 2: 4.

The species was redescribed, illustrated and keyed by Barták (1985: 34). There are 7 specimens under "*Rhamphomyia magellensis* n. sp." belonging to three different species: *R. freyi* Barták, 1985 (Maiella, 24. vii. 17, 2M, Acquasanta (probably Acquasanta Terme), 15. viii. 99 1M; same locality, 18. viii. 94, 2M), *R. australis* Frey, 1922 (Maiella, 24. vii. 17, 1M), and *R. magellensis* (Alp. noric. Nassfeld, Palmén, "4175", 1M). It is hardly possible to state if the above specimens are paralectotypes because of vague definition of them in the original description, but at least the specimen from Nassfeld has the same data as lectotype (designated by Barták 1985, from the part of type series deposited at Helsinki).

Rhamphomyia (*s. str.*) *nubigena* Bezzi, 1904 (Fig. 1)

Rhamphomyia nubigena Bezzi, 1904: Anns. hist. - nat. Mus. natn. hung., 2: 200.

Described from "in Jugo Stelviano marem leg. Pokorny, in summis alpihus insubricis, prope Berninam, 2800 - 3000 m. s. m. in lapidibus uterque sexus a me lectus". There are 10 specimens deposited in MCM under "*Rhamphomyia nubigena* typ. n. sp.", all of them should be syntypic. However, only two of them (one male and one female) belong to the true *R. nubigena* (with very dense and long haired palpi and two basal antennomeres: "antennarum basi palpisque majusculis longe - pilosis" as stated in the original description). The male was selected by me as a lectotype and it is designated herewith. It is well preserved specimen, labelled: Muretto (= Passo del Muretto), xx vii. xx" (xx are illegible dates). The female from Painale (= Val di Painale), 31. vii. 1901 was labelled as paralectotype. Other material: *R. discoidalis* Becker, 1889 (St. Moritz, 26. vii. 1902, leg. Oldenberg, 1M), *R. melania* Becker, 1887 (St. Moritz, leg. Oldenberg, 1M, 1F, Pirola, 3. viii. 1904, 4M, Merigio (= Pizzo Merigio), 13. vii. 1902, 1M). *R. nubigena* belongs to the *R. (s. str.) melania* - group, which is very similar to *R. albosegmentata* - group (practically all characters given by Barták 1981 are same with the exception of the shape of male genitalia, where the phallus is narrowed apically and ventral bristles on hind femur, which are replaced with soft hairs in most species). This group of species contains four described species



Fig. 1 - *Rhamphomyia nubigena* Bezzi, V. Foraz, leg. Keiser, male genitalia (macerated), scale = 0.1 mm.

(*R. melania*, *R. nubigena*, *R. azauensis* Barták, 1983, *R. longirostris* Lindner, 1972) and further two still undescribed species from Albania and Israel. *R. longirostris* was, according to inadequate original description, treated by Chvála & Wagner 1989 (p. 281) as *Aclonempis*. Therefore, this group of species needs urgent revision. *R. nubigena* differs from other species of *R. melania* - group in having very short, almost absent costal bristle, extremely long haired basal antennal segments and palpi, especially in male and peculiarly shaped hind tibiae in female which are rather flattened and almost bare anteriorly (somewhat similar to *R. luridipennis* Nowicki, 1868).

Redescription of *R. nubigena* male: head black, all parts with grey pruinosity except genae which are broadly lustrous. Eyes meeting on frons (lectotype) or narrowly separated on distance about half a diameter of an ommatidium. Ommatidia in upper half of compound eye about twice larger than those on lower part. Frons and face bare. Occiput rather densely covered with long hairs. Ocellar bristles fine, a little shorter than the distance between lower ocellus and base of antennae, there are a few other similar hairs inserted inside ocellar triangle. Antennae brownish black, hairs on both basal antennomeres are a little longer than the length of both these segments taken together. Ratio of antennal segments (in 0.01 mm scale) 1: 2: 3: style = 2: 1: 6: 1. 2. Labrum brown, lustrous, 1.0 - 1.2 times as long as head is high. Palpi brown, long, densely covered with long black hairs. Thorax brown (in lectotype, which seems to be rather immature) to brownish black, mesonotum almost velvety black in some cases, with brownish grey pruinosity, without any stripes. All bristles and hairs black. There are 8 - 12 hairs forming pronotal "collar", 20 - 30 hairs on sides of prosternum and 10 - 16 hairs on propleura (supraproepisternum), tip of prosternum bare, 16 - 26 biserial.

rather fine acrostichals are about three times as long as the distance between rows of ac and dc, 26 - 38 multiserial dc of the same thickness and length spread out down the sides of mesonotum, ending in 3 - 4 prescutellar pairs. There are up to 30 humeral hairs of various length, ih mostly not differentiated from other hairs, ph may be present, 3 - 4 n, 0 - 4 hairs in front part of notopleura, sa badly differentiated from other numerous hairs, 1 long and another short pa, 6 - 12 sc. Coxae brownish black, grey pruinose, densely covered with long black hairs. Legs brown, femora subpolished, covered with black bristles and hairs. Fore femur with posterior and pv surface densely covered with bristles 1. 5 times as long as femur is deep, dorsal and anterior hairs are about half as long as femur is deep. Fore tibia with 6 - 8 ad bristles twice as long as tibia is thick, pd surface densely covered with bristles and hairs 2. 5 times as long as tibia is thick. Middle femur with av hairs about as long as femur is deep, pv and p surface with hairs a little longer than femur is deep. Middle tibia with 2 - 4 ad and 6 - 8 pd bristles up to twice as long as tibia is thick, both av and pv absent. Hind femur with fine av and pv hairs up to as long as femur is deep, posterior surface with hairs which are 1. 5 times as long. Hind tibia with ad and pd rows of bristles up to twice as long as tibia is thick. First fore tarsomere with 2 - 3 hairs dorsally which are about one third as long as this tarsomere is long, first tarsomere of middle leg short haired, of hind leg with a few hairs dorsally which are a little longer than this tarsomere is thick. Wing membrane yellowish along costal margin, the rest clear, stigma brown, costal bristle almost absent or present but only very slightly longer than other costal ciliation nearby. Veins brown, vein A complete, ax angle sharply acute, cell D a little elongated (M2: D = 1. 0 - 1. 1). Halteres brown, squama brown with brown fringes. Abdomen brown, terga subpolished, sterna only indistinctly subpolished, all bristles and hairs black. Hind marginal bristles on sides of tergites 2 - 5 about as long as these segments, on sides of tergites 6 - 7 shorter. Genitalia very similar to *R. melania* (Fig. 1). Length of body 5. 5 - 6. 1 mm, wing 5. 2 - 6. 0 mm.

Redescription of female: Similar to male with the exception of usual sexual differences. Other characters distinctly differing from those in male are as follows: eyes broadly dichoptic, frons on each side with 8 - 11 bristles up to 2/3 as long as frons is broad. Ratio of antennal segments = 2. 5: 1: 5. 5: 1. 3. Labrum 1. 3 - 1. 6 times as long as head is high. Thoracic bristles a little shorter than in male, being about 2. 5 times as long as the distance between rows of ac and dc. Fore femur with pv and p surface densely covered with hairs which are a little longer than femur is deep. Fore tibia with two rows of bristles dorsally about as long as tibia is thick, ventral hairs extremely short. Middle and hind femur with short av hairs, ad and pv are a little shorter than femur is deep and a little flattened. Middle tibia with two rows of bristles dorsally which are up to as long as tibia is thick, pv bristles very short, av almost absent. Hind tibia slightly flattened, with bare anterior surface, two rows of dorsal bristles very short (about one third as long as femur is deep). First tarsomeres of all legs short haired, hind one slightly flattened and of the same peculiar character as hind tibia. Abdomen brown, terga 2 - 5 lustrous, other parts with grey pruinosity, sterna slightly subpolished. Marginal bristles on sides of tergites 2 - 4 about one third as long as these segments, on the 5th and following terga shorter. Length of body 5. 1 - 6. 5 mm, wing 5. 9 - 6. 5 mm.

Distribution: *R. nubigena* is known from high altitudes in the Alps.

Rhamphomyia (*s. str.*) *pokornyi* Bezzi, 1904

Rhamphomyia pokornyi Bezzi, 1904: Annl. hist. - nat. Mus. natn. hung., 2: 198.

Described from: "Vindobona ("Franz-Josephsland") et Stadlau". There are three male and two female syntypes deposited at MCM under "*Rhamphomyia Pokornyi* typ n. sp.". One male was selected and it is herewith designated as a lectotype. It is a well preserved specimen with only mesonotum slightly deformed, labelled "F J Land 2. v. 89" and "coll. Pokorny". Remaining syntypes were labelled as paralectotypes (Stadlau, 25. iv. 87 1M, 1F, same loc., but 6. v. 87 1F, F J Land, 2. v. 89, 1F). *R. pokornyi* has been redescribed and illustrated by Barták (1982: 410). It can be differentiated from all other Palearctic species of the *R. (s. str.) coracina* - group by predominantly pale and multiserial ac, light grey mesonotum, and straight, flat and short processi on 7th sternite in male. Female is very similar to *R. coracina* and *R. malaisei* but it differs from both of them in having abdomen pruinose including the 7th tergite, and only tergite 8 is slightly subpolished.

Description of a new species

Rhamphomyia (Aclonempis) mariobezzii sp. n. (Fig. 2)

Male. Eyes meet on frons, upper ommatidia enlarged. Frons brownish black, bare. Ocellar bristles black, long, without accompanying bristles on ocellar triangle. Face hidden under antennae in holotype but it seems to be brownish black, bare, lustrous below, also clypeus polished in upper part. Occiput brownish black, pruinose, sparsely covered with fairly long bristles, these form almost two rows and they are brown in upper portion and pale below. Antennae black, both basal antennomeres with short bristles. Ratio of antennal segments (in 0.1 mm scale) 1: 2: 3: style = 1: 0.7: 2.3: 1.5. Labrum brown, lustrous, 1.2 - 1.3 times as long as head is high, labellae of *Aclonempis* - type. Palpi brown, with one preapical bristle. Thorax black, fairly light grey pruinose, without any stripes. Bristles on mesonotum black, but some thoracic bristles pale. Some 9 hairs forming pronotal "collar", 3 - 4 pale hairs on sides of prosternum, tip of prosternum bare, 4 pale hairs on propleura. 16 - 18 biserial, fairly fine black ac are a little shorter than the distance between rows of ac and dc. 12 biserial dc are black, a little longer than ac, ending in 2 precutellars, outer row diverging. One black h and a few additional both black and pale hairs. 1 black ih. 1 ph. 2 - 3 black n, a few pale hairs in front part of notopleura, 1 black sa, with 1 - 3 small prealar hairs, 1 pa, 2 long and 2 much shorter sc, mtp1 pale. Coxae brownish black, pruinose, pale haired. Legs blackish brown, pruinose, covered with both pale and brown bristles and hairs. A bristle in "comb" at tip of hind tibia absent. Fore femur sparsely covered with fine av and pv half as long as femur is deep. Front tibia with 4 - 6 bristles dorsally 1.5 times as long as tibia is thick. Middle femur with two rows of very long bristles ventrally, which are at least three times as long as femur is deep. Middle tibia with two rows of bristles ventrally twice as long as tibia is thick, 3 very long ad up to one third as long as tibia is long, pd short. Hind femur sparsely covered with fine av and p hairs about as long as femur is deep. Hind tibia with two rows of bristles dorsally about twice as long as tibia is thick. Front and middle basitarsus short haired, hind one covered with bristles both dorsally and ventrally about twice as long as this tarsomere is thick. Hind basitarsus not broader than tip of hind tibia. Wings clear, somewhat milk



Fig. 2 - *Rhamphomyia mariobezzii* sp. n., holotype, hypopygium (not macerated), scale = 0.1 mm.

white, stigma absent. Costal bristle long, veins pale, vein A incomplete. Vein M1 shortened before tip. Ax angle acute, about 70° , halteres yellow, squama yellow with pale "fringes", cell D short. Abdomen blackish brown, both terga and sterna lustrous except basal portions. All bristles and hairs pale, hind marginals on sides of tergites a little shorter than segments. Genitalia (Fig. 2) of peculiar shape: phallus bent in right angle, syncercus (upper lamella) slender, directed upwards. Length: body 2.9 mm, wing 3.2 mm.

Female. Unknown.

Holotype. A male, deposited at Museo Civico Milano, labelled: "Gospić 16. vii.", "var. als *Rhamphomyia umbripennis* blotimont" (rather illegible manuscript notice).

Derivatio nominis. The species is dedicated to Dr. Mario Bezzi.

Differential diagnosis. The species of *Rhamphomyia* with abbreviated vein M1 were thoroughly treated by Smith (1971). The species described above represents, beside *R. leptopus* Loew, 1873 and *R. andalusiaca* Strobl, 1899, the third known European *Aclouempis* with this peculiar feature of wing venation. However, *R. leptopus* has dark bristles on abdomen, complete vein A and quite different genitalia (compare description and illustration given by Frey, 1956: 447, fig. 308). Lectotype of *R. andalusiaca* was designated by Barták 1984 and this species differs from *R. mariobezzii* in having abdomen pruinose, dark

metapleural bristles and quite different genitalia with low syncercus and phallus forming simple bow. In spite of the fact that female of *R. mariobezzi* remains unknown, I suppose that it differs from any other European *Rhamphomyia* (*Aclonempis*) with shortened vein M1 in having pale metapleural and abdominal bristles because these features are usually not sexually different in the subgenus *Aclonempis*. I thank very much Prof. M. Chvála who kindly examined the holotype and excluded possible confusion with an aberrant *Empis*.

Distribution. Croatia (North Dinaric).

Types of other authors deposited at MCM

Rhamphomyia (*s. str.*) *bezzii* Frey, 1922

Rhamphomyia bezzii Frey, 1922: Notul. ent., 2: 74.

Described from Venina (= Val Venina), Italy. There is one paralectotype male (Venina, 12. vii. 99) deposited at MCM under "*Rhamphomyia Bezzii* Frey typ.". Identity: *Rhamphomyia* (*s. str.*) *armimana* Oldenberg, 1910. *R. armimana* was redescribed, illustrated and keyed by Barták (1981: 371).

Rhamphomyia (*s. str.*) *brevipila* Oldenberg, 1922

Rhamphomyia brevipila Oldenberg, 1922: Dt. ent. Z., 1922: 342.

This species was treated in details by Barták (1981: 374). There is one male paralectotype deposited at MCM originating from type locality (St. Moritz, by lectotype designation by Barták 1981) labelled "St. Moritz 3. 8. 06 Oldenbg." "type" and "*brevipila* m. Old.". Beside this specimen, under "*brevipila*" there is also 1M of *R. crinita* (Italia sup. Mt. Cenis (= Moncenisio), 54. viii. 18 Kertész) and 1M and 1F of *R. chionoptera* (Muretto (= Passo del Muretto), 18. viii. 04).

Rhamphomyia (*Pararhamphomyia*) *curvula* Frey, 1913

Rhamphomyia curvula Frey, 1913: Acta Soc. Fauna Flora fenn., 37: 22.

The species was described from many localities from north Europe. There is one paralectotype male under "*Rhamphomyia curvula* Frey paratypes" deposited at MCM from Kantalaks labelled by Frey as "Spec. typ." and "2106", and another male (highly probably also paralectotypic) from Muonio ("2811"). One female from Kuusamo is probably also paralectotypic, as well as another female from Kantalaks, but the latter female is more similar to *R. unguiculata* Frey, 1913. Females of *R. unguiculata* and *R. curvula* are extremely similar and badly distinguishable in some cases. *R. curvula* was redescribed and illustrated by Barták 1982: 423.

Rhamphomyia (*Pararhamphomyia*) *dentata* Oldenberg, 1910

Rhamphomyia dentata Oldenberg, 1910: Annl. hist. - nat. Mus. natn. hung., 8: 344.

Described from the environment of Berlin. There are 1M and 3F syntypes deposited at MCM labelled "Berlin Finkenkrug 12. v. 07" "dentata n. sp. det. Oldenberg". *Rhamphomyia dentata* can be easily recognised according to the original description, which took over Frey (1956: 475).

Rhamphomyia (*s. str.*) *hirsuta* Oldenberg, 1922

Rhamphomyia hirsuta Oldenberg, 1922: Dt. ent. Z., 1922: 346.

The species was treated in details by Barták (1981: 379) and synonymised

with *R. crassimana* Strobl, 1898. There are two paralectotypes in MCM under "*Rhamphomyia hirsuta* Oldb parat.". One male labelled "Tschamintal (= Val di Ciamin), 27. 6. 14" and "hirsuta m. Old." is a specimen of *R. crassimana*, the other one with the same data is heavily damaged, indeterminable. Paralectotype in MCM confirms the synonymy, stated rather tentatively by Barták (1981).

Rhamphomyia (*s. str.*) *hirtimana* Oldenberg, 1922

Rhamphomyia hirtimana Oldenberg, 1922: Dt. ent. Z., 1922: 340.

The species was treated in details by Barták (1981: 385). There are 4M and 2F paralectotypes originating from the type locality (Sulden (= Solda), by lectotype designation by Barták, 1981). Beside them, there are 2M of *R. albosegmentata* Zetterstedt, 1838 from Kohlbachtal (= Stdenovodská dolina in V. Tatry Mts.), these were erroneously published as *R. hirtimana* by Barták (1981). *R. hirtimana* should be, therefore, excluded from checklist of Slovak diptera.

Rhamphomyia (*Megacyttarus*) *kamtschatica* Frey, 1922

Rhamphomyia kamtschatica Frey, 1922: Notul. ent., 2: 7 (M) and 9 (F).

Described from Kamtschatka. There is one female syntype in MCM under "*Rhamphomyia kamtschatica* Frey parat." labelled "Kamtschatka: Bolscherjetsk. 20. vii. 1917 Y. Wuorentaus" and "Spec. typ. No. Choreodr. kamtschatica Frey". *R. kamtschatica* was redescribed by Frey (1956: 517).

Rhamphomyia (*Aclonempis*) *minor* Oldenberg, 1922

Rhamphomyia minor Oldenberg, 1922: Dt. ent. Z., 1922: 340.

There are 1M and 1F syntypes labelled "Tiers (= Tires) 16. 6. 14" "minor m. Old." and "Typen" deposited at MCM. The original description, which was almost exactly taken over by Frey (1956: 447) is rather confusing because *R. minor* was compared here with *R. umbipes* Becker, 1887. In fact, with almost equally bowed phallus, it is more similar to *R. albohirta* Collin, 1926 (of course, unknown to Oldenberg in 1922). However, *R. albohirta* is larger, with subbasal swelling of phallus less prominent and vein A depigmented, incomplete (almost complete and brownish in *R. minor*).

Rhamphomyia (*s. str.*) *montana* Oldenberg, 1915

Rhamphomyia montana Oldenberg, 1915: Arch. Naturg., 80(A) (9)(1914): 87.

The species was treated in details by Barták (1981: 393), where a lectotype was designated. There are 2M paralectotypes from Spindelmühle (= Spindlerův Mlýn in Krkonoše Mts., 8. 91) and another males from Cusiano (viii. 98) and Moncenisio (8. 1905, leg. Bezzi). Beside them, under "*Montana*" is arranged one male of *R. chionoptera* (Mureto (= Passo d. Mureto) 4. viii. 1907).

Rhamphomyia (*Aclonempis*) *nox* Oldenberg, 1917

Rhamphomyia nox Oldenberg, 1917: Arch. Naturg., 82A(1)(1916): 155.

Described from Tschamintal (= Val di Ciamin) (Dolomites). There are 1M and 1F syntypes deposited at MCM labelled "Tschamintal 1. 7. 14" "Typen" and "Rh. nox m. Oldenbg.". Beside original description (taken over by Frey 1956: 448) this species can be recognised according to figure of male genitalia given by Frey 1956 (Fig. 311).

Rhamphomyia (*s. str.*) *oldenbergi* Frey, 1922

Rhamphomyia oldenbergi Frey, 1922: Notul. ent., 2: 72.

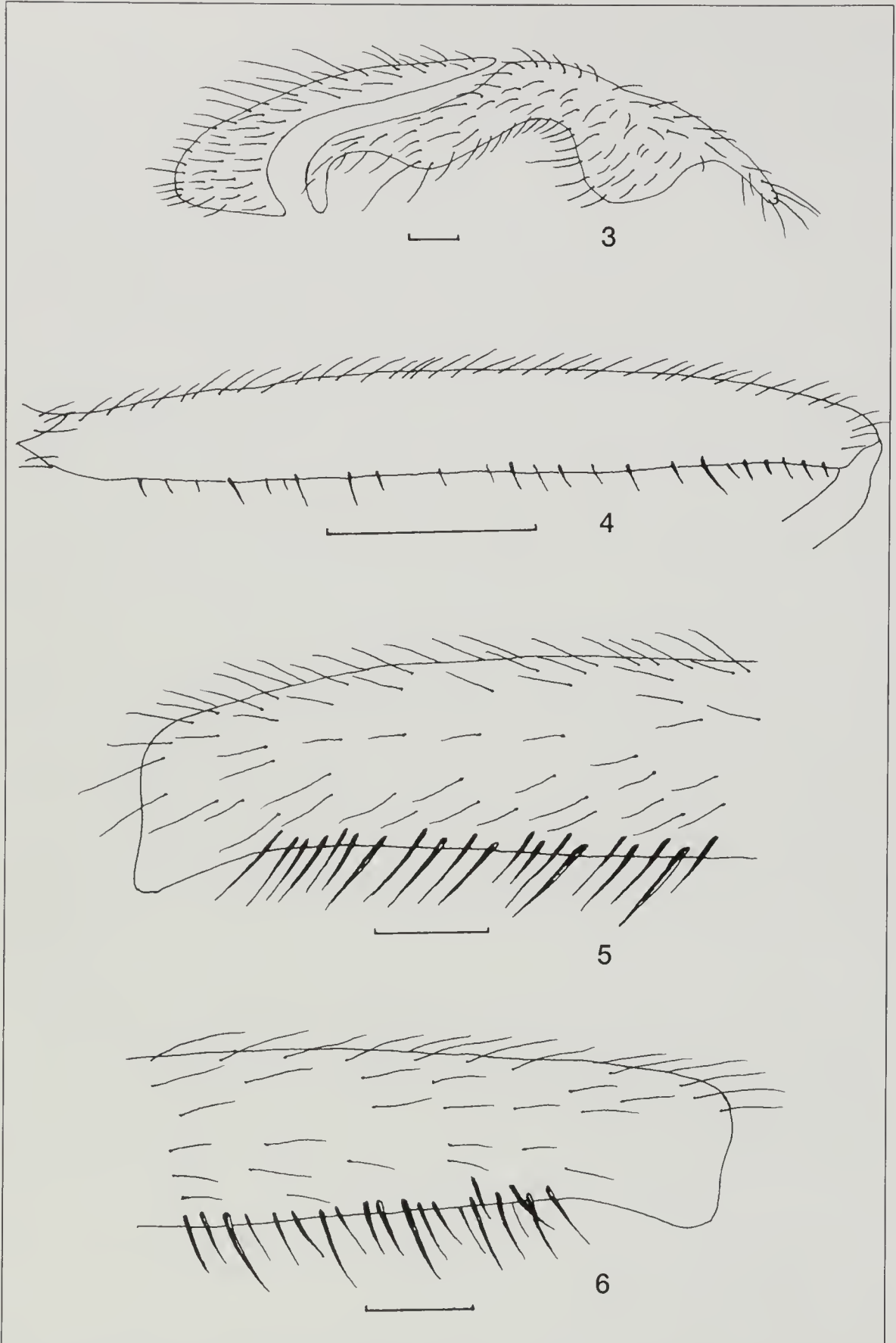
The species was described from Austria (Semmering) and Italy. There are two specimens under "*Rhamphomyia oldenbergi* Frey parat.", both being probably syntypes (Malenco (= Val Malenco), 18. v. 1901, 1M, M. (= Monte) Regnolo, 19. v. 1907, 1M). Identity: *R. tibialis* Meigen, 1822. The male from M. Regnolo is unusually small (length of body 5 mm, wing 5.3 mm), with mesonotum subpolished. The synonymy of *R. oldenbergi* with *R. tibialis* was proposed by Collin (1961: 397), but in fact nobody examined Meigen's type of this species. Descriptions of *R. tibialis* in Collin (1961: 395) and Barták (1982: 414) have been based on Oldenberg's identifications, see also Collin (1961: 397).

Rhamphomyia (*s. str.*) *scitula* Frey, 1922 (Figs. 3 - 6)

Rhamphomyia scitula Frey, 1922: Notul. ent., 2: 71 (M) and 72 (F).

Described from "Ungarn, Italien (coll. Bezzi)". There are six specimens under "*Rhamphomyia scitula* Frey type" deposited in MCM belonging to four different species, at least five specimens may be syntypes. It is hardly possible to identify syntypes because of vague definition of them in the original description. One best preserved male I selected as a lectotype and designate it herewith. It is well preserved, labelled "Togno (= Val di Togno) 29. vi. 02" and "Spec. typ. No *Rhamphomyia scitula* Frey". Two other conspecific specimens were labelled as paralectotypes (same data as lectotype, 1F, Livrio (= Val del Livrio), 6. vi. 01, 1F). Other specimens: *R. fuscipennis* (Austria inf., Schneeberg, 14. vii. 1887, 1F, coll. Pokorny). *Rhamphomyia* (*s. str.*) *sp.* (V. Fontana, 1. viii. 02, 1F), with hairs on the 2nd abdominal tergum very short on sides, which character is unknown in described species of *R. sulcata* - group. *Rhamphomyia sp. cf. sulcatina* (Stalak, Kertész, 6. vi. 1905, 1M), differing from *R. sulcatina* in multiserial ac, greater number of rather long pv bristles in apical third of hind femur and a little different male genitalia. *R. scitula* is a member of *R. (s. str.) sulcata* - group (characterized by the following combination of characters: tip of prosternum with hairs, body completely with black bristles and hairs, halteres yellow, costal bristle absent, vein A complete, ax angle sharply acute, propleura hairy, hind femur with bristles ventrally, male syncercus short, not protruding above abdomen). Male is very similar to *R. sulcatina* (with brown wings, at least the 3rd abdominal tergite lustrous on extreme sides, eyes meeting on frons, both processi of syncercus unequal as to their size), but can be distinguished from it by side lamella covered by very short hairs ventrally near apex. Female is similar to *R. sulcatella* (with wings without clouding, both the 2nd and 3rd abdominal tergites with rather long hind marginal bristles exceeding margin of tergites, tergite 3 with numerous discal hairs), but hind femur is not swollen, with pv hairs almost absent (hind femur swollen in *R. sulcatella* and pv hairs present and distinctly flattened).

Redescription of *R. scitula* male: head black, all parts except genae with light grey pruinosity, all bristles and hairs black. Eyes meeting on frons, upper ommatidia strongly enlarged. Frons and face bare. Ocellar bristles, fine, half as long as the distance from lower ocellus to base of antennae, there are 6 - 8 additional shorter hairs on ocellar triangle. Occiput densely covered with long fine hairs. Labrum black with yellow tip, 0.9 - 1.1 times as long as head is high. Palpi brown, with fairly long but fine hairs. Ratio of antennal segments (in 0. 1



Figs. 3 – 6 - *Rhamphomyia scitula* Frey. Fig. 3) male genitalia, lectotype, from behind, scale = 0.1 mm. Fig. 4) paralectotype, female, hind femur, anterior view, scale = 1 mm. Fig. 5) lectotype, tip of hind femur, anterior view, scale = 0.2 mm. Fig. 6) lectotype, tip of hind femur, posterior view, scale = 0.2 mm.

mm scale) 1: 2: 3: style = 1. 5: 0. 8: 3. 5: 0. 7. Thorax black, light grey pruinose, there are sharply developed brown stripes below dc and rather less distinct stripe below ac. All bristles and hairs black. Tip of prosternum hairy, sides with numerous hairs. Pronotum with 16 - 20 hairs. More than 40 fine, irregularly triserial ac are about as long as the distance between rows of ac and dc. Great number of multiserial dc are a little longer and they densely spread down sides of mesonotum ending in 2 - 4 badly differentiated prescutellars, ih and ph indistinguishable from pubescence, 4 - 6 strong n, front part of notopleura with numerous hairs, 2 - 5 sa mixed with numerous prealar hairs, 1 long and 1 short pa, 6 - 8 longer and 2 - 4 shorter sc. Coxae black, grey pruinose, black haired. Legs brownish black, subpolished in some lights, covered with black bristles and hairs. One strong and long bristle in "comb" at tip of hind tibia. Front femur with fine hairs dorsally which are 2/3 as long as femur is deep, av and pv hairs are even shorter. Front tibia with pd bristles 1. 5 times as long as diameter of tibia, ad shorter, ventral hairs very short. Middle femur with av and pv rows of spines half as long as femur is high. Middle tibia with two rows of bristles dorsally 1. 5 times as long as diameter of tibia, pv bristles about as long as tibia is thick, av spines shorter. Hind femur with pv bristles up to as long as femur is high, av spines a little shorter, there is fine "pilosity" between rows of ventral bristles, pv in apical third of femur subequal to corresponding av. Hind tibia somewhat flattened, with two rows of bristles dorsally which are about as long as tibia is thick. Both front and middle basitarsus short haired, with short spines ventrally, hind basitarsus with 4 - 5 hairs dorsally a little longer than this tarsomere is thick. Wing membrane brown, stigma darker, costal bristle absent. Veins brown, vein A complete, ax sharply acute - angled. Halteres yellow, squama yellowish brown with short and fine brown "fringes" Cell D short, apical section of vein M2 1. 3 - 1. 5 times as long as cell D. Abdomen black, brownish grey pruinose, extreme sides of at least tergites 3 - 6 lustrous. All bristles and hairs black. Hind marginal bristles on sides of tergites 2 - 4 about as long as segments, on tergite 4 about 2/3 of segment's length, on the following shorter. Discal hairs subequal. Genitalia of *sulcata* - type, illustrated on Fig. 2, upper angle of syncercus 90 deg. Hairs along tip and lower margin of side lamella unusually short in comparison with other species of the *R. sulcata* - group. Length of body 8. 0 - 9. 1 mm, wing 8. 5 - 8. 8 mm.

Redescription of female: similar to male with the exception of usual sexual differences. Characters, which are more strikingly different from those in male are as follows: eyes separated on frons, all ommatidia subequal in size. Frons with about 20 short hairs on each side. Ocellar bristles a little longer than the distance between upper ocelli. Occiput with strong dense hairs in upper portion, sparse and fine hairs in lower portion. Ratio of antennal segments 1. 5: 0. 7: 3. 2: 0. 9. Ac and dc bristles 1/3 to 1/2 as long as the distance between rows of ac and dc. Fore femur short haired. Fore tibia with two rows of dorsal bristles badly differentiated, at most as long as diameter of tibia. Middle femur with short av spines (1/5 as long as femur is deep), pv almost absent. Middle tibia with 3 - 4 ad and pd bristles which are a little shorter than tibia is thick, ventral spines very short. Hind femur with fairly strong but sparse av up to half as long as femur is deep, pv almost absent. Hind tibia as in male. Hind basitarsus with 2 - 3 hairs dorsally not longer than its thickness. Abdomen black, light grey pruinose. Hind marginal bristles on sides of tergites 2 - 3 about 1/3 of length of these segments,

on tergite 4 about 1/4 as long, on the following they are shorter. Length of body 7.6 - 9.5 mm, wing 7.8 - 8.5 mm.

Distribution: known only from type localities in Italy (Rollo (in fact Rolla = Monte Rolla), Togno (= Val di Togno), Livrio (= Val del Livrio)); data from V. Fontana (mentioned in original description) belong to another species.

Rhamphomyia (Pararhantomyia) unguiculata Frey, 1913

Rhamphomyia unguiculata Frey, 1913: Acta Soc. Fauna Flora fenn., 37: 24.

The species was described from Muonio, Enontekis, Pyhäjärvi, and Imandra. There is one male paralectotype under "*Rhamphomyia unguiculata* Frey parat." deposited at MCM labelled "Enontekis" "4375" and "Spec. typ.". *R. unguiculata* was redescribed and illustrated by Barták 1982: 433.

Localisation of Italian Localities

Acquasanta Terme	Marche - prov. Ascoli Piceno (AP)
Chiareggio	Lombardia - prov. Sondrio (SO)
Cusiano	Trentino
Moncenisio	Piemonte - prov. Torino (TO)
Monte Mandrone	Trentino
Monte Regnolo	Emilia - prov. Parma (PR)
Monte Rolla	Lombardia - prov. Sondrio (SO)
Mori	Trentino
Passo d. Muretto	at the boundary between Lombardia, prov. Sondrio (SO), and Switzerland, cant. Graubünden = Grigioni (GR)
Pieve di Ledro	in fact currently in Trentino, not in Alto Adige = Südtirol
Pirola	Lombardia - prov. Sondrio (SO)
Pizzo Merigio	Lombardia - prov. Sondrio (SO)
Porto Ceresio	Lombardia - prov. Varese (VA)
Solda	Alto Adige
Tires	Alto Adige
Val del Livrio	Lombardia - prov. Sondrio (SO)
Val di Ciamin	Alto Adige
Val di Painale	Lombardia - prov. Sondrio (SO)
Val di Togno	Lombardia - prov. Sondrio (SO)
Val Fontana	Lombardia - prov. Sondrio (SO)
Val Malenco	Lombardia - prov. Sondrio (SO)
Val Venina	Lombardia - prov. Sondrio (SO)

Acknowledgements

I thank Dr. Maurizio Pavesi, of the Museo Civico di Storia Naturale, Milan, Italy, and Dr. Riccardo Sciaky for enabling me to study all types of Palaearctic *Rhamphomyia* deposited in the Museum. I thank very much Prof. M. Chvála, who kindly examined the holotype of *Rhamphomyia (Aclonenuptis) mariobezzii* sp. n. and excluded possible confusion with an aberrant *Enupis*. My special thanks are due to Dr. Maurizio Pavesi for his great help with interpretation of Italian localities. This paper was supported by grant No 206/95/0970 of Czech Grant Agency.

References

- Barták M., 1981 - A revision of the *Rhamphomyia albosegmentata* - group (Diptera, Empididae), with descriptions of new species. *Acta Univ. Carolinae (biologica)*, 1979 (1981): 361-407.
- Barták M., 1982 - The Czechoslovak species of *Rhamphomyia* (Diptera, Empididae), with description of a new species from Central Europe. *Acta Univ. Carolinae (biologica)*, 1980 (1982): 381-461.
- Barták M., 1985 - A revision of the *Rhamphomyia* subgenus *Lundstroemiella* (Diptera, Empididae). *Acta Univ. Carolinae (biologica)*, 1982 - 1984 (1985): 9-46.
- Barták M., 1984 - A revision of the species of the genus *Rhamphomyia* (Diptera, Empididae) described by Gabriel Strobl. *Beitr. Ent.*, Berlin, 34 (2): 337 - 342.
- Frey R., 1956 - Empididae. In: Lindner E. Die Fliegen der Palearktischen Region. Stuttgart: 385-639.
- Chvála M. & Wagner R., 1989 - Empididae. In: Soós, Á - Papp, L. Catalogue of Palearctic Diptera. *Akadémiai Kiadó*, Budapest: 228-336.
- Collin J. E., 1961 - British Flies: Empididae. *Cambridge University Press*.
- Smith K. G. V., 1971 - The sub-Saharan species of *Rhamphomyia* and *Coptophlebia* with abbreviated discal venation (Diptera: Empididae). *Ann. Natal Mus.*, 21 (1): 77-96.

Ricevuto: 23 ottobre 2000

Approvato: 23 ottobre 2000 (consegnato già revisionato)